

Patent Claims Analysis

of

US9031537: "Electronic wireless hand held multimedia device"

against

OnePlus Smartphones

US9031537B2

United States

Inventor Luis M. Ortiz, Kermit D. Lopez

Current Assignee Mesa Digital LLC

Worldwide applications

2001 US 2008 [US](#) 2009 US 2013 [US](#) [US](#) 2015 [US](#)2017 [US](#)

<a href="#">09/887,492</a>	Claims priority from a provisional application	<a href="#">60/214,339</a>	06/27/2000
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Total patentTerm Adjustments

[arrow\\_upward](#)

894days

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CLAIMS

1. An electronic wireless hand held multimedia device, comprising:

at least one of a wireless unit and a tuner unit supporting bi-directional data communications of data including video and text for the electronic wireless hand held multimedia device with remote data resources over cellular telecommunications networks, over wireless local area networks and over a direct wireless connection with electronic devices located within short range using Bluetooth communications after accepting a passcode from a user of the electronic wireless hand held multimedia device during the communications;

a touch sensitive display screen configured to display the data including video and text received by the electronic wireless hand held multimedia device by selecting a particular data represented by a soft button on the touch sensitive display screen of the electronic wireless hand held multimedia device; and

a microprocessor configured to facilitate operation of and communications by the electronic wireless hand held multimedia device.

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2. The electronic wireless hand held multimedia device of claim 1, further comprising a global positioning module configured to provide location information for the electronic wireless hand held multimedia device.

3. The electronic wireless hand held multimedia device of claim 1, further comprising a cartridge reader configured to transfer data with an electronic cartridge.

4. The electronic wireless hand held multimedia device of claim 1, further comprising a mobile payment module enabling mobile payments via a variety of billing arrangements.

5. The electronic wireless hand held multimedia device of claim 1, further comprising a security module enabling protected data management and communications security.

6. The electronic wireless hand held multimedia device of claim 1, further comprising a video camera enabling the capture, storage, processing and transmission of video and pictures.

7. The electronic wireless hand held multimedia device of claim 1, further comprising a wireless infrared transceiver supporting bi-directional line-of-site data communications of the electronic wireless hand held multimedia device over an Infrared wireless connection with electronic devices located within line of sight from the electronic wireless hand held multimedia device.

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Row	Claim Element	Contention
1.0	1. An electronic wireless hand held multimedia device, comprising:	<p>You are visiting United States (English/USD) site. <span>×</span></p> <p>Switch to (/) &gt;</p> <p>OnePlus 11 5G is back in stock! FREE priority shipping  <span>×</span></p> <p> <b>1+ ONEPLUS</b> </p> <p>  All  Phone  Audio  Tablets  Gear  Power &amp; Cables  Cases &amp; Protection </p> <p>Meet the First Foldable from OnePlus. Open for Everything and Open for Everyone </p> <p><a href="#">View pricing</a></p> <p>Sort and filter </p> <div> </div> <div> <p><b>OnePlus Nord N30 5G</b> \$299.99</p> <p><b>OnePlus Open</b> 11 % OFF   Save up to \$45.00 with RedCoins \$1,499.99 <del>\$1,699.99</del></p> <p><b>OnePlus 11 5G</b> Up to 18% OFF   Save up to \$19.50 with RedCoins From \$649.99 <del>\$699.99</del></p> </div> <p>&lt;<a href="https://www.oneplus.com/us/store/phone">https://www.oneplus.com/us/store/phone</a>&gt; @ 2023</p> <p><i>OnePlus Smartphone is an electronic wireless hand held multimedia device.</i></p>
1.1	at least one of a wireless unit and a tuner unit supporting bi-directional data	<p><i>OnePlus Smartphone describes "LTE/LTE-A", "LTE", i.e., a wireless unit supporting bi-directional data communications of data including video and text for the electronic wireless hand held multimedia device with remote data resources over cellular telecommunications networks.</i></p>

communications of data including video and text for the electronic wireless hand held multimedia device with remote data resources over cellular telecommunications networks, over wireless local area networks and over a direct wireless connection with electronic devices located within short range using Bluetooth communications after accepting a passcode from a user of the electronic wireless hand held multimedia device during the communications;

### **LTE/LTE-A**

4x4 MIMO, Supports up to DL Cat 20/UL Cat 18 (2.0Gbps /200Mbps), depending on carrier support

### **LTE**

MIMO: LTE: B1, 2, 3, 4, 7, 25, 30, 38, 40, 41, 48, 66;

WCDMA : B1, 2, 4, 5, 6, 8, 19

LTE-FDD: B1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 30, 32, 66, 71

LTE-TDD: 38, 39, 41, (40), 46, 48

5G NR NSA: N1, N2, N3, N5, N7, N8, N20, N25, N28, N30, N38, (N40), N41, N66, N71, N75, N77, N78

5G SA: N1, N2, N3, N5, N7, N8, N20, N25, N28, N30, N38, N41, (N40), N66, N71, N75, N76, N77, N78

GSM: 850/900/1800/1900  
(No CDMA)

### **Wi-Fi**

2x2 MIMO, Support 2.4G/5G, Wi-Fi 7, Support WiFi 802.11 a/b/g/n/ac/ax/be

### **Bluetooth®**

Bluetooth® 5.3

Codex supported: aptX HD, aptX, LDAC, LHDC, AAC, SBC

<<https://www.oneplus.com/us/11/specs>> @ 2023

*OnePlus Smartphone describes "Wi-Fi", i.e., a wireless unit supporting bi-directional data communications of data including video and text for the electronic wireless hand held multimedia device with remote data resources over wireless local area networks.*

### **LTE/LTE-A**

4x4 MIMO, Supports up to DL Cat 20/UL Cat 18 (2.0Gbps /200Mbps), depending on carrier support

### **LTE**

MIMO: LTE: B1, 2, 3, 4, 7, 25, 30, 38, 40, 41, 48, 66;

WCDMA : B1, 2, 4, 5, 6, 8, 19

LTE-FDD: B1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 30, 32, 66, 71

LTE-TDD: 38, 39, 41, (40), 46, 48

5G NR NSA: N1, N2, N3, N5, N7, N8, N20, N25, N28, N30, N38, (N40), N41, N66, N71, N75, N77, N78

5G SA: N1, N2, N3, N5, N7, N8, N20, N25, N28, N30, N38, N41, (N40), N66, N71, N75, N76, N77, N78

GSM: 850/900/1800/1900  
(No CDMA)

### **Wi-Fi**

2x2 MIMO, Support 2.4G/5G, Wi-Fi 7, Support WiFi 802.11 a/b/g/n/ac/ax/be

### **Bluetooth®**

Bluetooth® 5.3

Codex supported: aptX HD, aptX, LDAC, LHDC, AAC, SBC

<<https://www.oneplus.com/us/11/specs>> @ 2023

*OnePlus Smartphone describes "Bluetooth", i.e., a wireless unit supporting bi-directional data communications of data including video and text for the electronic wireless hand held multimedia device with remote data resources over a direct wireless connection with electronic devices located within short range using Bluetooth communications.*

**LTE/LTE-A**

4x4 MIMO, Supports up to DL Cat 20/UL Cat 18 (2.0Gbps /200Mbps), depending on carrier support

**LTE**

MIMO: LTE: B1, 2, 3, 4, 7, 25, 30, 38, 40, 41, 48, 66;  
WCDMA : B1, 2, 4, 5, 6, 8, 19  
LTE-FDD: B1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 30, 32, 66, 71  
LTE-TDD: 38, 39, 41, (40), 46, 48  
5G NR NSA: N1, N2, N3, N5, N7, N8, N20, N25, N28, N30, N38, (N40), N41, N66, N71, N75, N77, N78  
5G SA: N1, N2, N3, N5, N7, N8, N20, N25, N28, N30, N38, N41, (N40), N66, N71, N75, N76, N77, N78  
GSM: 850/900/1800/1900  
(No CDMA)

**Wi-Fi**

2x2 MIMO, Support 2.4G/5G, Wi-Fi 7, Support WiFi 802.11 a/b/g/n/ac/ax/be

**Bluetooth®**

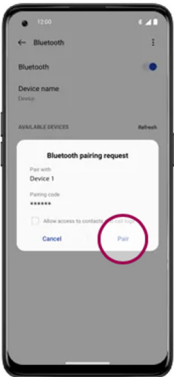
Bluetooth® 5.3  
Codex supported: aptX HD, aptX, LDAC, LHDC, AAC, SBC

<<https://www.oneplus.com/us/11/specs>> @ 2023

Tutorials > OnePlus > Nord N20 5G > Connections & Network > Pair with another device

**Connections & Network > Pair with another device**

[All categories](#) | [Change device](#) | [All topics](#)



**7** If this screen appears, verify the code and choose **Pair**. If this screen does not appear, enter the PIN code of the selected Bluetooth device and choose **Pair**. This code can be found in the manual of the selected Bluetooth device (usually 0000 or 1234). The connection will be made. Follow any instructions on the

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		<p><a href="https://www.oneplus.com/us/11/specs">5g/topic/connections-amp-network/pair-with-another-device/7</a>&gt; © 2023</p> <p><i>Bluetooth connections typically require a passcode or PIN (Personal Identification Number) when you are pairing two devices for the first time, especially if they are not previously paired or trusted devices. This passcode is a security measure to ensure that only authorized devices can connect to each other.</i></p> <p><i>The passcode is usually a numerical code, such as "0000" or "1234." Some devices may generate random passcodes for added security. When pairing, both devices will prompt you to enter the same passcode to complete the connection. Once paired, the devices often remember each other, and you won't need to enter the passcode again in the future, unless you unpair them or reset their Bluetooth settings.</i></p> <p>• <b>Bluetooth - Wikipedia</b>  <a href="https://en.wikipedia.org/wiki/Bluetooth">&lt;https://en.wikipedia.org/wiki/Bluetooth&gt;</a></p> <p><b>Passkey Entry:</b> <i>This method may be used between a device with a display and a device with numeric keypad entry (such as a keyboard), or two devices with numeric keypad entry. In the first case, the display presents a 6-digit numeric code to the user, who then enters the code on the keypad. In the second case, the user of each device enters the same 6-digit number. Both of these cases provide MITM protection.</i></p>
1.2	a touch sensitive display screen configured to display the data including video and text received by the electronic wireless hand held multimedia device by selecting a particular data represented by a soft button on the touch sensitive display screen of the electronic wireless hand held multimedia device; and	<p><i>OnePlus Smartphone describes "Display: Touch", i.e., a touch sensitive display screen configured to display the data including video and text received by the electronic wireless hand held multimedia device by selecting a particular data represented by a soft button on the touch sensitive display screen of the electronic wireless hand held multimedia device.</i></p> <p><b><u>Display</u></b></p> <p>Size: 6.7" (measured diagonally from corner to corner)  Resolution: 3216*1440 (QHD+), 525 ppi  Aspect Ratio: 20.1:9  Refresh Rate: 1-120 Hz dynamic  Type: 120 Hz Super Fluid AMOLED with LTPO  <u>Touch</u> Response Rate: Up to 1000 Hz  Support sRGB, Display P3, 10-bit Color Depth  Cover Glass: Corning® Gorilla® Glass Victus</p> <p><a href="https://www.oneplus.com/us/11/specs">&lt;https://www.oneplus.com/us/11/specs&gt;</a> @ 2023</p>
1.3	a microprocessor configured to facilitate operation of and communications by the electronic wireless hand held	<p><i>OnePlus Smartphone describes "CPU: Qualcomm® Snapdragon™ 8 Gen 2 Mobile Platform", i.e., a microprocessor configured to facilitate operation of and communications by the electronic wireless hand held multimedia device.</i></p>

	multimedia device.	<p>Operating System: OxygenOS 13.0 based on Android™ 13</p> <p>CPU: Qualcomm® Snapdragon™ 8 Gen 2 Mobile Platform</p> <p><u>5G Chipset: X70</u></p> <p>GPU: Adreno 740</p> <p>RAM: 8GB/16GB LPDDR5X</p> <p>Storage: 128GB UFS 3.1/256GB UFS 4.0</p> <p>Battery: 5,000 mAh (Dual-cell 2,500 mAh, non-removable)</p> <p>SUPERVOOC 80W</p> <p>Vibration: Haptic motor</p> <p>Available configurations: 8GB+128GB / 16GB+256GB</p> <p>&lt;<a href="https://www.oneplus.com/us/11/specs">https://www.oneplus.com/us/11/specs</a>&gt; @ 2023</p>
Row	Claim Element	Contention
2.1	2. The electronic wireless hand held multimedia device of claim 1, further comprising a global positioning module configured to provide location information for the electronic wireless hand held multimedia device.	<p><i>OnePlus Smartphone describes "GPS (L1+L5 Dual Band)", i.e., a global positioning module configured to provide location information for the electronic wireless hand held multimedia device.</i></p> <p><u>GPS (L1+L5 Dual Band)</u>, GLONASS, Galileo (E1+E5a Dual Band), Beidou, A-GPS, QZSS</p> <p>&lt;<a href="https://www.oneplus.com/us/11/specs">https://www.oneplus.com/us/11/specs</a>&gt; @ 2023</p>
Row	Claim Element	Contention
5.1	5. The electronic wireless hand held multimedia device of claim 1, further comprising a security module enabling protected data management and communications security.	<p><i>OnePlus Smartphone describes "Face Unlock", i.e., a security module enabling protected data management and communications security.</i></p> <p><b>Features</b></p> <p><u>Face Unlock</u>, Selfie HDR, Screen Flash, Nightscape Selfie, Face Retouching</p> <p>&lt;<a href="https://www.oneplus.com/us/11/specs">https://www.oneplus.com/us/11/specs</a>&gt; @ 2023</p>
Row	Claim Element	Contention
6.1	6. The electronic wireless hand held multimedia device of claim 1, further comprising a video camera enabling the capture, storage, processing and	<p><i>OnePlus Smartphone describes "Video", "Front Camera", , i.e., a video camera enabling the capture, storage, processing and transmission of video and pictures.</i></p>



transmission of video and pictures.

**Video**

8K video at 24 fps  
4K video at 30/60 fps  
1080p video at 30/60 fps  
720p video at 30/60 fps  
Super Slow Motion: 1080p video at 240 fps, 720p video at 240/480 fps  
Time-Lapse: 4K/1080p at 30 fps  
Video Editor

**Features**

Photo Mode, Video Mode, Portrait Mode, Night Mode, Pro Mode, Panorama, Movie Mode, Slo-motion, Time-Lapse, Long Exposure, Dual-View Video, Tilt-Shift Mode, Xpan Mode, Auto macro, AI scene enhancement, Master Style Filters, Retouch, AI Highlight Video, Ultra Steady Pro, Raw Plus file, Google Lens, 10bit Color, High Efficiency Image, etc.

**Front Camera**

Megapixels: 16  
Pixel Size: 1.0 μm  
Electronic Image Stabilization: Yes  
Autofocus: Fixed Focus  
Aperture: f/2.45

<<https://www.oneplus.com/us/11/specs>> @ 2023



Infringing Products	
<b>OnePlus</b>	<ul style="list-style-type: none"><li>• <i>OnePlus Nord N10 5G</i></li><li>• <i>OnePlus Nord N100 5G</i></li><li>• <i>OnePlus Nord N20 5G</i></li><li>• <i>OnePlus Nord N200 5G</i></li><li>• <i>OnePlus Nord N30 5G</i></li><li>• <i>OnePlus Nord N300 5G</i></li><li>• <i>OnePlus Open Emerald Dusk 16 GB RAM + 512 GB Storage</i></li><li>• <i>OnePlus Open Voyager Black 16 GB RAM + 512 GB Storage</i></li><li>• <i>OnePlus 11 5G Titan Black 8 GB RAM + 128 GB Storage</i></li><li>• <i>OnePlus 11 5G Eternal Green 16 GB RAM + 256 GB Storage</i></li><li>• <i>OnePlus 11 5G Titan Black 16 GB RAM + 256 GB Storage</i></li><li>• <i>OnePlus 10T 5G</i></li><li>• <i>OnePlus 10 Pro 5G</i></li><li>• <i>OnePlus 9 Pro 5G</i></li><li>• <i>OnePlus 9 5G</i></li><li>• <i>OnePlus 8T+ 5G</i></li><li>• <i>OnePlus 8 5G</i></li><li>• <i>OnePlus 7T Pro 5G</i></li><li>• <i>OnePlus 7T</i></li><li>• <i>OnePlus 7 Pro</i></li><li>• <i>OnePlus 6T</i></li><li>• <i>OnePlus One</i></li></ul>